

under the impression that the variation observed was a sudden appearance of a character not otherwise met with in Flat-fishes; but since the publication of the paper Professor W. C. McIntosh has informed me that flat-fishes of some species in the ordinary course of development, while swimming on edge, go through a stage in which they are marked on both sides with a row of dorsal and ventral spots placed just as in my specimen. He has referred me to his paper in Proc. Roy. Inst. 1889, xii. p. 396, where examples of such larval fishes are figured. I am further indebted to Prof. McIntosh for a specimen showing this condition, and similar specimens were also shown to me by Mr. E. W. L. Holt.

My case of variation is therefore an example of a persistence of larval coloration, and not of the appearance of a new character. It is consequently much less important than I imagined, though the comment respecting the similarity and simultaneity of the variation of the two borders still applies.

4. On the Orthoptera of the Sandwich Islands.

By HERR BRUNNER v. WATTENWYL¹.

[Received November 19, 1895.]

The Orthopterological Fauna of the Sandwich Islands is little known, so that all collections made in them ought to produce novelties. Mr. Aug. de Bormans, in 1882, published descriptions of 17 species. The collection made by Mr. R. C. L. Perkins with much labour in 1894 contains examples of 23 species, which are only in part identical with those of the first collection.

If we combine the results of these two explorations, we must confirm the conclusion already arrived at by Mr. de Bormans that this fauna is distinguished by its poverty, and notably by the absence of the *Mantodea* and *Phasmodea*. The *Acridiodes* are represented by only a single species.

With the exception of some cosmopolitan species, the fauna is composed of species already known from the Australian Archipelago and of autochthonous species that are allied to the others. The genus *Brachymetopa*, represented by three or four species, is peculiar to the Hawaiian Archipelago. It is a member of the group *Conocephalini*.

In the family *Gryllodea* the two new species of *Paratriginidium* are remarkable. This genus, hitherto, has only been recorded from Asia.

A new genus, *Prognathogryllus*, consists of two anomalous forms.

Finally we meet with two species which evidently are recent importations. The first of these is *Oxya velox*, Fab., the unique representative of the *Acridiodes*, which is very common in the

¹ Communicated by Dr. D. SHARP, F.Z.S., on behalf of the Committee for investigating the Fauna of the Sandwich Islands.

Malay Islands, and the second a *Xiphidium*, which I cannot distinguish from a European species.

D E R M A P T E R A.

1. ANISOLABIS LITTOREA, White.

Forcinella littorea, Dohrn, Stett. ent. Zeit. xxv. p. 287.

Oahu; Haleakala, Maui (*Borm.*).

2. ANISOLABIS MARITIMA, Bon.

Anisclabis maritima, Brunner, Prodr. p. 9.

Maui (*Borm.*).

3. ANISOLABIS PACIFICA, Erichs.

Koele, Lanai; Waimea, Kauai, 3000 ft. (*Perkins*).

4. ANISOLABIS ANNULIPES, Luc.

Molokai, 3000–4000 ft. (*Perkins*).

5. LABIA PYGIDIATA, Dubr.

Labia pygidiata, Dubrony, Ann. Mus. Civ. Genov. xiv. p. 364.

Oahu (*Borm.*); Kona, Hawaii (*Perkins*).

6. CHELISOCHES MORIO, Fab.

Lobophora morio, Dohrn, Stett. ent. Zeit. xxvi. p. 71.

Common in the whole archipelago (*Borm.*); Pelekunu, Molokai (*Perkins*).

7. FORFICULA HAWAIIENSIS, Borm.

Forficula hawaiiensis, de Bormans, Ann. Mus. Civ. Genov. xviii. p. 341.

Several islands (*Borm.*).

B L A T T O D E A.

8. PHYLLODROMIA HIEROGLYPHICA, Brun.

Phyllodromia hieroglyphica, Brun. Nouv. Syst. Blattaires, p. 105.

Oahu (*Perkins*, *Borm.*); Lanai, Kauai (*Perkins*).

9. PHYLLODROMIA OBTUSATA, sp. n.

Colore testaceo. Caput latum, testaceum unicolor. Antennæ fusce. Pronotum unicolor vel disco leviter fusco-delineato, latum, antice et postice truncatum. Elytra abdomen haud superantia, unicoloria. Alæ apice obtusæ, leviter infumatae, vena ulnari simpliciter furcata. Femora antica subtus submutica, apicem versus spinulis minimis alineatis armata. Abdomen fuscum. Lamina supra-analis ♀ triangularis, apice triangulariter emarginata. Lamina subgenitalis ♀ late triangularis. ♀.

Long. corporis	7·5–9·5 millim.
„ pronoti	2·2–2·5
Lat. pronoti	3·5–3·7
Long. elytrorum ..	5·6–7

Kona &c., Hawaii (*Perkins*).

10. *STYLOPYGA DECORATA*, Brun.

Stylopyga decorata, Brun. Nouv. Syst. Blattaires, p. 224.
Honolulu, in the houses (*Borm.*).

11. *METHANA LIGATA*, Brun.

Methana ligata, Brun. Nouv. Syst. Blattaires, p. 234.
Honolulu, in the houses (*Borm.*).

12. *PERIPLANETA AMERICANA*, L.

Honolulu (*Borm.*).

13. *ELEUTHERODA DYTISCOIDES*, Serv.

Eleutheroda dytiscoides, Brun. Nouv. Syst. Blattaires, p. 265.
Honolulu (*Perkins*); Honolulu, in the wall-trees (*Borm.*).

14. *LEUCOPHÆA SURINAMENSIS*, Fab.

Leucophæa surinamensis, Brun. Nouv. Syst. Blattaires, p. 278.
Environs of Honolulu, under stones (*Borm.*); Maui, Wailuku
(*Perkins*).

15. *ONISCOSOMA PALLIDA*, Brun.

Oniscosoma pallida, Brun. Nouv. Syst. Blattaires, p. 301.
Haleakala, Maui, 650 m. (*Borm.*).

16. *EUTHYRRAPHA PACIFICA*, Coqueb.

Euthyrrapha pacifica, Brun. Nouv. Syst. Blattaires, p. 343.
Honolulu (*Borm.*); Kaawaloa, Hawaii (*Perkins*).

ACRIDIODEA.

17. *OXYA VELOX*, Fab.

Oxya velox, Brun. Rév. Syst. p. 152.
Waianae Mts., Oahu, 1600 ft., April (*Perkins*).

LOCUSTODEA.

18. *ELIMÆA APPENDICULATA*, Brun.

Elimæa appendiculata, Brun. Monogr. Phaneropt. p. 101.
Honolulu (*Borm.*, *Perkins*).

19. BRACHYMETOPA DISCOLOR, Redtenb.

Brachymetopa discolor, Redtenb. Verh. z.-b. Ges. Wien, 1891, p. 431.

Honolulu (*Redtenb.*); Kaala Mts., Waianae Mts., Oahu (*Perkins*).

20. BRACHYMETOPA BLACKBURNI, Borm.

Brachymetopa blackburni, Redtenb. l. c. p. 431.

In nearly all the Islands, on the forest trees (*Borm.*).

21. BRACHYMETOPA DEPLANATA, sp. n.

Viridis vel griseo-testacea. Fastigium verticis æque latum ac longum, apice rotundatum, superne deplanatum. Antennæ unicolores viridi-flavæ. Frons viridis. Labrum cum mandibulis pallide ferrugineum. Elytra variabilia, abdominis longitudine vel medium ejus haud superantia, tympano in elytro sinistro ♂ subopaco. Pedes unicolores. ♂ ♀.

	♂.	♀.
Long. corporis.....	19	21 millim.
„ fastigii vert.	1.1-1.5	1.9
„ pronoti	5.5-5.6	5.9
„ elytrorum	6-9.5	9
„ femor. post.	10-11.5	12.5
„ ovipositoris	11.5

Lanai, 2000 ft.; Kalae, 4000 ft.; Molokai; Makaweli, 3000 ft., Kauai (*Perkins*).

22. BRACHYMETOPA NITIDA, sp. n.

Viridis vel griseo-testacea. Fastigium verticis angustius quam longius. Antennæ unicolores virides. Frons viridis. Labrum pallidum. Mandibulæ subtotæ nigræ. Elytra in ♂ abdomen æquantia, in ♀ medium ejus superantia, tympano in elytro sinistro ♂ nitido. Femora omnia in apice ipso nigro-bipunctata. ♂ ♀.

	♂.	♀.
Long. corporis.....	21	22.5 millim.
„ fastigii vert. ..	1.2	1.2
„ pronoti	5.7	6.4
„ elytrorum ..	12	13
„ femor. post. ..	13	14.5
„ ovipositoris	11.5

Kona, Mauna Loa, 2000 ft., Hawaii (*Perkins*).

23. XIPHIDIUM FUSCUM, Fab.

Xiphidium fuscum, Redtenb. Verh. z.-b. Ges. Wien, 1891, p. 508. Pauoa, Oahu, Dec. 1892 (*Perkins*).

GRYLLODEA.

24. GRYLLUS INNOTABILIS, Walk.

Gryllus innotabilis, Sauss. Mél. Orth., V. Gryllides, p. 336.

In nearly all the Islands of the Archipelago (*Borm.*); Kalae, Molokai; Waianae, Oahu; Kona, 2000 ft., Hawaii (*Perkins*).

25. GRYLLODES POEYI, Sauss.

Grylloides poeyi, Sauss. Mél. Orth., V. Gryllides, p. 387.

Waianae Mts., Oahu; Waimea Mts., 3000 ft., Kauai (*Perkins*).

26. PARATRIGONIDIUM PACIFICUM (Scudd.).

Trigonidium pacificum, Scudd. Proc. Bost. Soc. N. H. xii. p. 139 (1868).

The description given by Scudder being very incomplete, I give a new diagnosis of this species, which comes into my genus *Paratrigonidium* (Révision du syst. des Orth. p. 208).

Colore castaneo. Frons pallide signata. Antennæ fuscae. Pronotum pilis fuscis raris obsitum. Elytra apicem abdominis attingentia, in ♂ plana, tympano venulis indistinctis toto rugosa. Elytra in ♀ fornicata, cornea, venis parallelis rectis necnon venis spuris intercalatis instructa. Pedes fusce et pallide variegati. Tibiæ anticæ in latere externo tympano minimo instructæ. ♂ ♀.

	♂.	♀.
Long. corporis	6	7 millim.
„ pronoti	1.6	1.5
„ elytrorum . .	4.4	4.5
„ femor. post. .	5	5.8
„ ovipositoris	3

Environs of Honolulu (*Borm.*); Waianae, Oahu; Kauai; Lanai; Molokai; Kona, Hawaii (*Perkins*).

27. PARATRIGONIDIUM ATROFERRUGINEUM, sp. n.

Colore atro et ferrugineo. Caput cum pronoto atrum. Antennæ, excepto articulo basali, cum palpis ferrugineæ. Elytra in ♂ ferruginea, plana, medio atra, in ♀ unicoloria ferruginea. Femora omnia atra, apice ferruginea. Tibiæ ferrugineæ. Ovipositor ater. ♂ ♀.

	♂.	♀.
Long. corporis	7.5	6.8 millim.
„ pronoti	1.5	1.6
„ elytrorum . .	4.6	4
„ femor. post. .	4.3	4.5
„ ovipositoris	3

Molokai, 4000 ft. (*Perkins*).

I am obliged to create a new genus for two species peculiar to the Hawaiian Archipelago. This genus belongs to the *Podoscirtes* group, and is distinguished from all the other genera of this group

by the more porrect head, so that the front forms a very obtuse angle with the vertex. This extraordinary form approaches most nearly to the genus *Stenogryllus* of Saussure.

PROGNATHOGRYLLUS, gen. nov. ex tribu Podoscirtium.

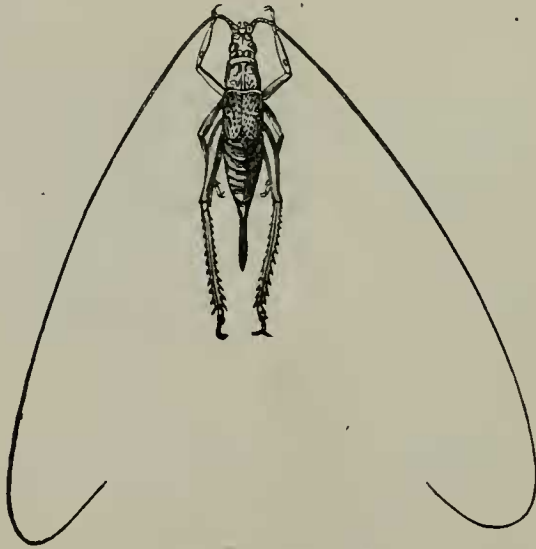
Corpus gracile. Caput prognathum. Vertex valde depressus, cum fronte angulum obtusissimum formans. Frons inter antennis compressa. Antennæ longissimæ, fortiores. Pronotum elongatum, planum, latere vix deflexum. Elytra valde abbreviata vel nulla. Alæ nullæ. Femora postica a basi sensim graciliscientia. Tibiæ anticae muticæ, tympano nullo instructæ. Tibiæ posticæ superne utrinque serrulatæ vel in latere interno spinalis longioribus instructæ; calcaribus tribus externis brevissimis, duobus internis majoribus, superiore duplo longiore quam inferius. Tarsi postici elongati, metatarso terete, mesotatarso bilobato, articulo ultimo metatarso cæque longo. Ovipositor subrectus, femore postico haud longior. ♀

Dispositio specierum.

- | | |
|---|---------------------------------|
| 1. Elytra brevia adsunt. Tibiæ posticæ superne in latere interno spinis distinctis armatæ | 1. <i>alatus</i> , sp. n. |
| 1'. Elytra nulla. Tibiæ posticæ superne utrinque serrulatæ | 2. <i>forficularis</i> , sp. n. |

28. PROGNATHOGRYLLUS ALATUS, sp. n. (Fig. 1.)

Fig. 1.



Prognathogryllus alatus.

Ferrugineus. Frons infra insertionem antenarum cum marginibus scrobum antenarum infuscata. Occiput fasciis fuscis ornatum. Pronotum fusco-variegatum, margine postico late

limbato. Elytra metanotum parum superantia, fusca, venis pallidis. Tibiæ posticæ in margine interno spinulis 10 armatæ. Cerci ovipositorem æquantæ. ♀.

Long. corporis . . .	21 millim.
„ pronoti . . .	4
„ elytrorum . .	5·5
„ femor. post.	12
„ ovipositoris .	8·5

Waimea Mts., 4000 ft., Kauai (*Perkins*).

29. *PROGNATHOGRYLLUS FORFICULARIS*, sp. n. (Fig. 2.)

Fig. 2.



Prognathogryllus forficularis.

Statura minore. Corpore aptero, fusco-ferrugineo, latere utrinque fascia fusca a capite usque ad apicem abdominis ornato. Frons cum occipite tota pallida. Antennæ graciles, infuscatae. Pronotum margine postico truncato, acuto (non limbato). Tibiæ omnes fusco-annulate, posticæ superne utrinque serratæ. Cerci tertiam partem ovipositoris haud superantes. ♀.

Long. corporis . . .	12 millim.
„ pronoti . . .	3
„ femor. post.	7·5
„ ovipositoris .	4·5

Kona, 3000 ft., Hawaii (*Perkins*).

5. On the Classification of the *Schænobiiinæ* and *Crambinae*, two Subfamilies of Moths, of the Family *Pyrallidæ*. By G. F. HAMPSON.

[Received October 7, 1895.]

The two subfamilies of *Pyrallidæ*, the *Schænobiiinæ* and *Crambinae*, of which a classification is here given, have much resemblance to each other in both superficial appearance and structure, and are also equally nearly related to the *Hydrocampinæ*, all three subfamilies being parallel developments from the primitive stock of the *Pyrallidæ*, of which the more generalized *Pyraustinæ* and the *Scopariinæ* are probably the nearest living representatives.